

MOSQUITO NOTES.—No. 3.

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(Continued from page 102.)

Stethomyia pallida, n. sp.—♀. Head light testaceous, a few white flat lanceolate scales on the vertex, otherwise clothed with sparsely set slender hair-like curved brown scales, nearly as long as the very slender fork scales which occur on the occiput; two light brown bristles project forward between the eyes, and a few around the eyes. The head shows no sign of having been denuded, and besides the slender hair-like scales is covered with a short fine tomentum or frostiness, such as is often seen on the thorax of *Anophelina*. Antennæ brown, verticels brown, pubescence white, basal joint testaceous with frosty tomentum; palpi long and slender, covered ventrally with the short fine hairs of the frosty tomentum, dorsally with small flat brown scales, a couple of bristles or long hairs at the apex; proboscis light brown, covered with very thin flat scales and curved hair-like scales, a few bristles at the base, tip lighter; eyes dark brown; clypeus light, with frosty tomentum.

Thorax light testaceous, sparsely covered with hair-like brown curved scales, and frosty tomentum, prothoracic lobes a little darker, and with curved hair-like scales; scutellum like mesonotum; pleura light, with a few groups of hair-like curved brown scales; metanotum brown.

Abdomen apparently mottled brown and light, but this may be due to drying, and clothed with rather long brown hairs.

Legs unusually long and slender; coxæ and trochanters light, with a few hair-like curved brown scales. Remainder of the legs light, covered with small, thin brown scales, which, in some lights, however, look much darker, with almost purple iridescence, in other lights almost fawn colour. Ungues simple and equal.

Wing clear, brown scaled, with lanceolate scales; the 1st submarginal extremely long, nearly twice as long as the second posterior cell, and a little narrower, the stem about half the length of the cell, and a third shorter than that of the 2nd posterior; cross-veins close together, and all about the same length, the supernumerary about half its length interior to the mid, and the posterior about its own length interior to the mid. Halteres, stem light, knob dark.

Length, 3.5 mm. (legs more than 10 mm.)

Habitat.—Camp Stotsenberg, Angeles, Pampanga, Luzon, P. I. Taken Sept.? "Caught in the woods."

Described from one very perfect specimen sent by Dr. Whitmore in the collection referred to below.

In spite of the fact that the prothoracic lobes are not mammillated, and indeed seem stalked, the other characteristics point so strongly to *Stethomyia* that I have decided to put this insect under that genus.

HEIZMANNIA, nov. gen.

Head covered with broad flat scales; thorax with flat spindle-shaped scales, very broad on the lateral thirds of the mesonotum; scutellum with broad flat scales; metanotum with large median bunch of chætæ (not less than 16-20) on caudad half; wing scales somewhat resembling *Tæniorhynchus* scales, but the median scales at times inclined to be asymmetrical. Cells small. Ungues in female simple and equal.

This genus evidently lies near *Dendromyia*, Theobald, but Mr. Theobald says it cannot be included under that genus, the large bunch of bristles on the mesonotum being too marked a characteristic, and I therefore give it a place by itself.

It is named after Col. C. L. Heizmann, Asst. Surgeon-General, U. S. A., whose continued interest in and effective support of this research, extending over several years, have been invaluable in making possible such success as has been attained.

Heizmannia scintillans, n. sp.—♀. Head brown, with brown flat, iridescent (peacock blues and greens) scales, heavy white rim around the eyes, and a white spot between the eyes (at point of vertex), brown bristles projecting forward; antennæ mostly gone, basal joint brown, with short fine hairs on the median side; palpi brown; proboscis brown; a few bristles at the base; eyes brown; clypeus brown.

Thorax brown; mesonotum densely covered with dark flat, broadly spindle-shaped iridescent scales; prothoracic lobes heavily covered with broad flat, white scales; pleura brown, thickly covered with broad flat, white scales; scutellum brown, densely covered with broad flat, brown iridescent scales; metanotum rich brown, with heavy median bunch of brown bristles (not less than 16-20) on caudad half.

Abdomen dark, densely covered with broad dark (almost black) flat iridescent scales; the venter with broad white bands, very broad on the cephalic segments, which extend so far around as to appear from the dorsal aspect like basal lateral white spots.

Legs, coxæ and trochanters light; femora of hind legs ventrally light, less so on the other legs, and otherwise the legs are dark brown; metatarsi and tarsi of fore and mid legs in some lights are almost a fawn colour; hind tarsi are missing. All the ungues equal and simple.

Wings clear, with heavy brown scales resembling those found in *Tæniörhynchus*, but the median scales, especially on costa, subcosta and 1st longitudinal veins, heavier and inclined at times to be asymmetrical; cells short; 1st submarginal a little longer, and about the same width as 2nd posterior cell, the stems a little shorter than the cells; supernumerary and mid cross-veins are about the same length, and meet the posterior cross-vein a little longer, and one and a half times its length distant. Halteres have white stem and knob dark.

Length, about 4 mm.; proboscis, 2 mm.

Habitat.—Camp Stotzenberg, Angeles, Paþanga, Luzon, P. I. Taken Sept. ?

Described from one specimen, perfect except as to the antennæ, sent by Dr. Whitmore.

Anisocheleomyia ? *albitarsis*, n. sp.—♀. Head brown, covered with very large, long flat scales, so loosely applied as to make the head look shaggy, a wide median white stripe extending from occiput to vertex, a few white scales and two brown bristles projecting forward between the eyes, a narrow white line around the eyes, the scales long and flat and projecting forward over the eyes, also some brown bristles; laterad to this broad median stripe is a broad, brown stripe, a narrow white stripe, a narrow brown and another narrow white stripe, all of the long flat loosely set scales. Antennæ brown, verticels and pubescence brown, first joint short and somewhat distended, and clothed with a few flat brown scales, basal joint brown, heavily scaled with rather large flat loosely applied white scales; palpi brown with white tips, the scales being unusually long, and square ended; proboscis brown scaled; clypeus brown; eyes brown, and the shaggy appearance of the head makes them seem extremely small, so that instead of being the larger part of the head, they are quite insignificant.

Thorax dark brown; prothoracic lobes covered with large white flat scales, much like those on the head, and some brown bristles; mesonotum brown, covered with brown and white curved scales, those on the cephalic and median parts very slender, almost hair-like, those at the sides and towards the scutellum broader, a narrow line of white scales running cephalad from one wing joint to the other (an inverted "U"), a median line connecting with it at the cephalad end, and extending to the scutellum, two short lines from the scutellum cephalad; pleura brown, with heavy bunches of broad long flat white scales arranged in rows; scutellum brown, deeply trilobed with large long flat scales closely set on each lobe so that they appear tufted; metanotum rich brown, bare.

Abdomen brown, covered with brown scales, and narrow white basal bands on most of the segments, lacking on the first and last three segments, which latter, however, have narrow lateral white spots, the continuation of the ventral marking. The ventral marking is rather peculiar. The proximal segments being mostly white scaled, with only narrow brown apical bands, but the last three segments are largely brown scaled, a narrow white line starting at the median line of the base of the antepenultimate, running sharply laterad and then caudad, forming the lateral white spots of the three last segments noted above; apical brown hairs, apparently much more numerous on the antepenultimate segment.

Legs all brown, with more or less white at the bases; coxæ and trochanters testaceous with white scales; fore femora dark brown, a narrow white line on the ventral side extending from the base to near the apex, where there is a white spot on ventral and lateral aspect, not appearing on the dorsal aspect; tibiæ brown, a very narrow white band a little proximal of the middle, on the cephalic aspect; metatarsi and first tarsal joint basally light banded, second, third and fourth joints brown; mid femora light at the base, a distinct white spot about midway and an indistinct white spot interior to this, both on the cephalic aspect, also a brilliant white spot at the apex; tibiæ brown, with a white band about midway, metatarsi and 1st tarsal joints have white basal bands, the rest of the tarsi brown; hind femora brown, white at base and nearly two-thirds its length, and apex white (femora therefore mostly white); tibiæ brown, with median white band; metatarsi and first and second tarsal joints with heavy basal white bands, the last two joints pure white. The ungues on fore and mid legs, though equal and simple, are much heavier than are usually found on any mosquito of this size, the hind ones markedly smaller, but, having only one specimen, I have not dissected it, so that while fairly sure that it belongs to *Anisocheleomyia*, Theobald, it is impossible to state definitely the peculiar shape of the ungues. It is, I think, quite certain, however, in spite of the flat scales on head and scutellum, it is not a *Stegomyia*.

Wings clear, brown scaled, the scales very large, and of the *Tæniorhynchus* type, but a little inclined to asymmetry; cells short; 1st submarginal cell nearly a half longer and a little narrower than the 2nd posterior, the stem of the former about a third shorter than that of the latter; supernumerary and mid cross-veins equal and meet, posterior cross-vein also about the same length, and distant from the mid a little more than twice its own length; halteres light stem, with dark knob.

Length, 2.5 mm.

Habitat.—Camp Stotsenberg, Angeles, Pampanga, Luzon, P. I.
Taken Sept. ?

Described from one perfect specimen sent by Dr. Whitmore.

While the flat scales suggest *Stegomyia*, the general appearance of the insect is quite against it, the shaggy head bearing no resemblance to the neat appearance of *Stegomyia*. It is a small mosquito, and the scales on the head, scutellum and wing out of all proportion to the size of the insect, giving it a generally ragged look, so that though I have not been able to demonstrate the peculiar unguinal features of *Anisocheleomyia*, I feel fairly sure it belongs to that genus.

Teniorhynchus lineatopennis, n. sp.—♀. Head dark brown, with brassy yellow curved scales on median portion and extending from occiput to vertex, light bristles projecting forward, dark brown flat lateral scales, and a few forked scales, some light and some dark, on the occiput; antennæ dark brown, verticels dark brown, pubescence also dark, but appearing light in certain positions, basal joint brown; palpi dark brown, and quite hairy; proboscis dark brown; clypeus dark brown; eyes brown and silver.

Thorax: prothoracic lobes dark brown, with a few dark brown bristles, no scales; mesonotum dark brown, the median portion covered with dark brown curved scales bordered by a heavy band of brassy yellow curved scales, extending cephalad from one wing joint (inverted "U") across to the other, a very distinct and easily-recognized marking. The brown curved scales on the mesonotum near the scutellum appear in some lights white, and this seems characteristic of the brown scales all over the insect; pleura brown and clothed only with a few brown hairs; scutellum dark brown, with brassy yellow curved scales and a few light bristles; yellow bristles at the wing joint, and two sparsely-set rows on the mesonotum; metanotum dark brown.

Abdomen dark brown, with broad basal bands of "dirty white" scales hardly extending the full width of the terga; the first segment is dark, and the second has merely a median light spot, while on the ultimate segment the band is quite narrow; venter dark.

Legs are brown throughout; coxæ and trochanters and ventral side of femora somewhat lighter than the rest, a light spot near the apex of fore femora on dorsal side, *i. e.*, the ventral colour runs up, but all the scales show much change of colour in different lights; the tibiæ and more distal joints are darker, ranging from purplish to fawn colour, according to the angle of the light, and under hand lens may seem even brassy. All ungues simple and equal.

Wings clear, clothed with brown and light typical *Taniorhynchus* scales. The costa is dark throughout, the subcosta and first longitudinal are mostly light scaled from the base of the wing to about the junction of the subcosta, and the stem of the fifth long vein is also light, with some light scales on the lower fork. The scales vary much in different lights, the colours ranging from a gray to "dirty white" to brassy yellow, and the effect is of two light diverging lines on the wing; fringe dark, turning gray in some lights; 1st submarginal is a fourth longer and a little narrower than the 2nd posterior; the supernumerary cross-vein about half as long as the mid, which it meets, and the posterior cross-vein about half as long as the mid, and distant twice its own length; halteres have a light stem and dark knob.

Length, 3.5 mm.

Habitat.—Camp Gregg, Bayambang, Pangasinan, Luzon, P. I. Taken Sept. 13, 14, marked "inside screens of screened house."

Described from two perfect specimens sent by Capt. Chamberlain, Surgeon, U. S. A.

This collection of Dr. Whitmore's is interesting in many ways, for all the specimens showed great care in preparation and extremely good differentiation. In only two boxes were there more than one kind, and the only badly broken specimens were in places where the insect had been caught in tying up the small pieces of tubes in gauze; one extremely small mosquito was so much denuded as to be quite impossible to place, but otherwise the collection was in remarkably good shape, and contained, besides the genera and species above described, the following previously known forms:

Finlaya poicilia, Theobald. "Bred from larvæ taken from banana trees."

Mansonia uniformis, Theobald. "Caught in the Quarters."

Mansonia annulifera, Theobald. "Caught in the woods, Hospital and Quarters."

Desvoidea obturbans, Walker. "Bred from large larvæ taken from under overhanging rock, in a deep pool of a clear running stream. Larvæ resemble overgrown Anophelina larvæ, and are very cannibalistic."

Desvoidea fusca, Theobald. "Bred from larvæ taken from the water-filled joints of bamboo poles in the fence."

Stegomyia scutellaris, Walk., var. *Samarensis*, Ludlow. "Caught in the woods and Quarters."

Stegomyia nivea, Ludlow. "Caught in the woods."

Stegomyia fasciata, Fabr. "Caught in the woods and Quarters."

Myzomyia funesta? Giles. Caught in the woods, Hospital and Quarters."

Myzomyia Rossii, Giles, var. *indefinita*, Ludlow. "Caught in woods, Hospital and Quarters." Very common.

Myzorhynchus barbirostris, Van der Wulp. "Caught in the woods, and rarely in the Quarters."

Myzorhynchus pseudobarbirostris, Ludlow. "Caught in the woods, and rarely in the Quarters."

Pyretophorus Philippinensis, Ludlow. "Caught in the woods, and rarely in the Quarters."

Culex gelidus, Theobald. "Caught in the Quarters."

Culex microannulatus, Theobald. "Caught in the woods."

Culex annulifera, Ludlow. "Caught in the woods."

So far as the taking of the Anophelina is concerned, Dr. Whitmore's experience is quite different from that of Dr. Chamberlain, Capt. Asst. Surg. U. S. A., at Bayambang, Pangasinan, who takes *Myzomyia funesta*? Giles; *Myzomyia Ludlowii*, Theob.; *Myzomyia Rossii*, var. *indefinita*, Lud.; *Myzomyia Rossii*? Giles; *Myzorhynchus vanus*, Walk.; *barbirostris*, Van der Wulp; *pseudobarbirostris*, Lud.; *Pyretophorus Philippinensis*, Lud.; and *Nyssorhynchus fuliginosus*, Giles, in great numbers, both in and around the Quarters and Hospital, sending very suggestive collections of these from the bed nets of patients, while Dr. Whitmore apparently finds them mostly away from houses, *i. e.*, in woods and banana groves.

[ERRATA.—On page 94, line 6, for "a couple" read "some"; line 12, for "palpi two-jointed" read "palpi four-jointed, the first joint very short and the last minute"; page 97, line 4, for "white" read "light"; page 98, line 9 from bottom, change ";" after "legs" to ", "; and page 100, last line but one, for "above" read "below."]

THREE NEW COCCIDÆ FROM COLORADO.

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A series of tables for the identification of Rocky Mountain Coccidæ has been prepared for publication by the University of Colorado. Even now, while these tables await publication, I find myself obliged to add three new species, found here at Boulder; two of them representing genera new to our region. It is a rule of the University of Colorado publications that new species shall not appear for the first time therein, so I present herewith brief diagnoses of the three forms just mentioned.